

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 316T-002710PC	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US05/20992	International filing date (day/month/year) 14 June 2005 (14.06.2005)	(Earliest) Priority Date (day/month/year) 17 June 2004 (17.06.2004)
Applicant THE REGENTS OF THE UNIVERSITY OF CALIFORNIA		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the Report

a. With regard to the language, the international search was carried out on the basis of:



the international application in the language in which it was filed.



a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐

With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2.



Certain claims were found unsearchable (See Box No. II)

3.



Unity of invention is lacking (See Box No. III)

4.

With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5.

With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6.

With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. I



as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.



as selected by this Authority, because this figure better characterizes the invention.

b. ☐

none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/20992

A. CLASSIFICATION OF SUBJECT MATTER IPC(8): A61K 31/4439(2006.01),31/4433(2006.01),31/4436(2006.01) A61K 31/4439(2006.01),31/4433(2006.01),31/4436(2006.01) USPC: 514/303,338,339 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 514/303, 338, 339 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST, Medline		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y --- A	CHEN et al., "Inactivation of Adenosine A2A Receptors Selectively Attenuates Amphetamine-Induced Behavioral Sensitization" in Neuropsychopharmacology, 2003, vol. 28, pages 1086-1095	1-18, 28-39 ----- 19-27, 40-50
Y --- A	ACQUAS et al., Neuropsychopharmacology, 2002, vol. 27, pages 182-193	1-18, 28-39 ----- 19-27, 40-50
Y		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents:		
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	
"P" document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search 29 March 2007 (29.03.2007)	Date of mailing of the international search report 20 APR 2007	
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Sreeni Padmanabhan, PhD. Telephone No.	

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
JONATHAN ALAN QUINE
QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.
P.O. BOX 458
ALAMEDA, CA 94501

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing (day/month/year) 20 APR 2007		
Applicant's or agent's file reference 316T-002710PC	FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/US05/20992	International filing date (day/month/year) 14 June 2005 (14.06.2005)	Priority date (day/month/year) 17 June 2004 (17.06.2004)
International Patent Classification (IPC) or both national classification and IPC IPC(8): Please See Continuation Sheet USPC: 514/303,338,339		
Applicant THE REGENTS OF THE UNIVERSITY OF CALIFORNIA		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Date of completion of this opinion 29 March 2007 (29.03.2007)	Authorized officer Sreeni Padmanabhan, Ph.D. Telephone No.
---	--	--

Form PCT/ISA/237 (cover sheet) (April 2005)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US05/20992

Box No. 1 Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in electronic form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US05/20992

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

I. Statement

Novelty (N)	Claims <u>1-50</u>	YES
	Claims <u>NONE</u>	NO
Inventive step (IS)	Claims <u>19-27, 40-50</u>	YES
	Claims <u>1-18, 28-39</u>	NO
Industrial applicability (IA)	Claims <u>1-50</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Claims 19-27 and 40-50 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest the herein claimed composition and the method of screening a compound for inhibit addictive behavior.

Claims 1-18 and 28-39 lack an inventive step under PCT Article 33(3) as being obvious over Chen et al., in view of Acquas et al. Chen et al. teaches the inactivation of adenosine A2A receptors can attenuate the amphetamine-induced behavioral sensitization. Chen et al. also suggests that Adenosine A2A receptor antagonists may have the same effect on substance abuse. Acquas et al. teaches that the herein claimed compound SCH 58261 as selective Adenosine A2A receptor antagonist. It would have been obvious to one of ordinary skill in the art at the time of invention to employ any adenosine A2A antagonist, including SCH 58261, in a method of treating substance abuse, such as amphetamine addiction, since the inactivation of Adenosine A2A receptor would attenuate the amphetamine-induced behavioural sensitization.

Claims 1-50 meet the criteria set out in PCT Article 33(4), and thus have pharmaceutical industrial applicability because the subject matter claimed can be made or used in industry.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US05/20992

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of IPC:

A61K 31/4439(2006.01),31/4433(2006.01),31/4436(2006.01)

A61K 31/4439(2006.01),31/4433(2006.01),31/4436(2006.01)